REPORT

ON THE

WORKING AND CONDITION OF THE PUNJAB AGRI-HORTICULTURAL SOCIETY'S GARDEN, LAHORE,

FOR THE

YEAR 1881-82.

"ILLA PRESS," LAHORE.

Proceedings of His Honor the Lieutenant-Governor of the Punjab in the Revenue Department,—No. 190—1137, dated 23rd September 1882.

READ—

The Report of the working of the Punjab Agri-Horticultural Society's Garden at Lahore for 1881-82.

REMARKS.—The Report was received on the 18th August, or two days later than last year. It would be convenient to Government if the Honorary Secretary could arrange to submit it by the 1st of July in future.

2. The year was not altogether favorable for horticultural operations. In the unusually heavy rains of July 1881, parts of the garden were much damaged by floods; and many trees died during the severe winter frosts.

3. The sowing of eucalyptus seed in the gardens was very successful, and in six districts similar results were obtained with the seed distributed by the Society. The carob and olive trees continued to do well, but all the plants of the rain tree were killed by frost in February last.

4. The facts recorded as to the amount of manure suitable for the cultivation of turnips are interesting, and should be useful to gardeners. The experiments with oats, barley and wheat were very successful, the outturn of barley being, in one case, 39 maunds straw and 27½ maunds grain to the acre. The American wheats did not yield well; but it can hardly be assumed, on the strength of a single experiment, that they are entirely unsuited to the plains of the Punjab.

5. The trial of the Minnesota early amber-cane failed owing to these heavy rain of July. The Government of India has been asked if a further supply of the seed can be given for further sowings next year.

6. The income of the Society and the gardens during the year was Rs. 23,140 and the expenditure Rs. 23,079. In the Resolution of the Government of India, No. 7—274-8 of 15th September 1879, it was laid down that the grant-in-aid made to Agri-Horticultural Societies should have reference (1st) to the work actually done by the Society, and (2ndly) to the amount of income derived from private and local sources. As regards the work done by the Agri-Horticultural Society of the Punjab it was admitted that the acknowledged objects of such institutions had been steadily kept in view; and the Lieutenant-Governor is glad to believe that during the past three years the former standard of success and efficiency has been maintained. A statement should, however, be added to the Annual Report showing clearly the distribution of plants, seeds, &c., during the year to District and Municipal Committees or other Public Bodies subscribing to the Society. On the subject of the Government grant-in-aid, it was decided by the Government of India that this should not usually exceed one-third of the total income of the Society; permission was, however, given in the case of the Punjab for the continuance of the existing Government grant-in-aid of Rs. 9,000 on the condition that an increase should gradually take place in the income of the Society from other sources. This income in 1879 and in 1882 may be compared as follows:—

	1879.	1882.
	Rs.	Rs.
Grants from Local and Municipal Funds ...	5,910	5,910
Subscriptions	1,122	1,390
Sales of produce and miscellaneous ...	6,005	6,839
Total ...	13,037	14,139

There has therefore been an increase of Rs. 1,100 only in three years, and at this rate a total income of Rs. 27,000, or an income of which the present

Government grant-in-aid shall form one-third only, will not be attained for ten or twelve years more. The Lieutenant-Governor considers that this progress is decidedly slow, and would be glad if the Honorary Secretary of the Society would consult with the Commissioner of Agriculture, who has now been appointed in the Punjab, on the best means of increasing the income of the Society and gardens from private and local sources.

7. The attention of the Municipal Committee of Lahore and of the Irrigation Department of the Punjab Government will be invited to the condition of some of the roads in the gardens, and to the necessity of widening and protecting the escape drain which passes through them.

ORDER.—Ordered that the Report be distributed as usual with this Review, and that the Review be published in the *Punjab Government Gazette.*

Also, that a copy of the Review and of the Resolution of the Government of India, in the Home, Revenue and Agricultural Department, No. 7—274-8, dated the 17th September 1879, therein cited, be forwarded to the Financial Commissioner for communication to the Commissioner of Agriculture, with reference to paragraph 6 thereof.

Also, that copies be forwarded to the Joint-Secretary to Government, Irrigation Department, and the Commissioner of the Lahore Division, for report on the subjects noticed in paragraph 7 of the Review.

By order of the Hon'ble the Lieutenant-Governor,

C. L. TUPPER,

Junior Secretary to Government, Punjab.

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Printed at the Punjab Government Civil Secretariat Press, Lahore.—12-10-28.—50.

INTRODUCTION.

The Annual Report of the (so called) Agri-Horticultural Society for 1881-82 has been prepared by the Superintendent Mr. E. Spooner. I was not in charge, not having received the office of Secretary till the beginning of the year (official) 1882-83. The institution is in reality an agency entirely supported by Government and district funds for the purpose of importing or acclimatizing the seeds and raising the plants so largely in request all over the province. Its utility is, I think, unquestionable. There is, however, no Society: the few Members are merely gentlemen who subscribe in order to get seeds. The days are gone by when a considerable number of papers could be obtained and discussion got up about various plants and curiosities of the vegetable world then little known. Most of the plants are now well known, and proposals for their utilization have either been realized or are known to be futile. There is, therefore, no possibility of getting up interesting and instructive meetings, nor are there any subscribers who help simply for the sake of helping or for the love of Agri-Horticultural Art. The very few people who at Lahore take an interest in gardening are away during the hot weather and in camp in the cold.

The Secretaryship is at present an irksome and wholly uninteresting work of keeping accounts and disposing of letters, chiefly regarding money matters and orders for plants. In my opinion it is hardly fair to make such an office honorary. Unless the institution were managed by some one who could give some time to taking the initiative and stirring up an interest in agriculture, &c., all that can be done is to keep things going. It is also extremely difficult to attempt improvements, as the funds are so limited that it is difficult enough to maintain the work in *statu quo.*

I believe the whole work is nevertheless on a sound basis, but it wants a Secretary with some leisure. Through the past year I have had more work on my hands of one kind and another, than I knew how to get through. As regards the "Society's" working establishment, it is in fair order. The chief defect in the organization is that there is no gradation of subordinates. We have just two or three decently paid gardeners, and under them a host of coolies and boys, who in my opinion often succeed in doing little or no work, since it is impossible for the Superintendent to be all over the grounds at once. It is forgotten that in India forty men certainly do *not* do twice the work of twenty.

I have therefore urged on the Superintendent the necessity of reducing the number of men, of dividing the work into smaller sub-divisions, with a gardener over each. The men should be graded say on salaries of Rs. 20, 15, 10 and 8. There would be then promotion from one to the other; old and idle men should not be retained, because they have been long in the garden: and the smartest lads, taught in the school, should be picked out for the gardenerships; and it should be loudly proclaimed that efficiency gives the only claim to promotion.

It is no doubt a result of the system hitherto followed that we are never able to send out trained gardeners to districts or private persons asking for them, and that when such have been sent, they have invariably been failures.

Mr. Spooner has detailed the steps proposed to improve our nurseries. Owing to unavoidable circumstances, they are now so mixed up as to be unsightly, and what is *worse* unsuitable for the eduction of well grown trees. At present I must say I am rather ashamed of our nurseries than disposed to take people to see them. They *ought* to be perfect shows; and the public would extend their walks of a morning and evening, to see the varieties of grapes and oranges, the treatment and pruning of our peaches and plums, and would be able to visit the experimental fields of foreign grains, &c. In this way orders for plants would multiply, and a greater interest in gardening processes be excited. I am not attaching blame to any one for this; it is the necessary fruit of past circumstances; and the opening out of new plots to be systematically treated, so as to clear out the old, which can then be worked up properly *de novo*, is, as Mr. Spooner has explained, the only remedy.

B. H. BADEN POWELL,
Honorary Secretary, A. H. S.

REPORT ON THE WORKING AND CONDITION OF THE PUNJAB AGRI-HORTICULTURAL SOCIETY'S GARDENS, LAHORE, FOR THE YEAR 1881-82.

I.—GARDEN.

General.

THE year under report has not been on the whole favourable for gardening operations. The heavy rain-fall, during July and August, did considerable damage to young plants growing in the nurseries and other portions of the garden, as well as to the hot weather vegetable and other crops, several of which were entirely destroyed.

Drainage of the garden.

2. Many low lying portions of the gardens were completely inundated for several days after the first heavy fall of rain on the 9th of July 1881. This inundation was due to the surface drainage of the great portion of the adjacent country, which flows into the gardens through the drainage cut that enters the Lawrence Gardens opposite the main entrance to Government House grounds, and leaves the gardens on the Lawrence Road. This cut, as it is at present, is quite inadequate to carry off the enormous quantity of water which flows into it after a very heavy rain, the result being that it overflows its banks and floods the greater portion of the garden, and it is impossible for any portion of the garden to drain itself until the flow of water from without the garden has passed through.

It is very necessary that some arrangements be made to diminish the flow of water into the garden from outside, or increase the capacity of the present drain. This work cannot be done without the aid of the Municipality and the Executive Engineer of the Division.

Until something is done to remedy the defective drainage from outside, the Society cannot do anything of material benefit to improve the interior drainage of the garden,—a matter of great importance from a sanitary point of view, as well as to the welfare of the plants, &c., in the garden.

In 1876 the gardens suffered in a similar manner from being inundated, and the same is likely to occur again at any time after a more than usually heavy fall of rain. I need hardly say that after such an inundation, besides the great loss of plants, the gardens were for several days in a deplorable state, necessitating the employment of extra labor for clearing and repairing roads and walks. Some 40 cart loads of *surkhi* were got out from the top of one of the old mounds in the garden, and the worst paths around the Band stand, Conservatory and Office were covered with a layer of this material.

Roads.

3. Several of the driving roads in the garden are in bad condition, and need to be raised and metalled. The worst road is that between the Conservatory and the large mound opposite to it, and leading from the bridge near the garden office to the main drive. The road leading from the cricket ground, past the Superintendent's house to the entrance to the race course, is also very bad. Both these roads are almost impassable after a heavy rain. This work cannot be done without the aid of the Municipality, by whom the public roads in the garden have hitherto been repaired.

Thinning trees.

4. Owing to the great sickness prevalent amongst the establishment during the autumn, and from other causes, less was done in the way of thinning trees than was intended. A good many of the commoner kinds were, however, felled in the nurseries, but the difference is hardly noticeable. In most parts of the garden there is a great deal remaining to be done in this direction.

The income from sales of timber and prunings amounted to Rs. 286, being Rs. 103 in excess of receipts from the same source in 1880-81.

ARBORICULTURE.

Distribution of Eucalyptus seed.

5. In para. 10 of Report for 1880-81 I alluded to the distribution of a quantity of acclimatized Eucalyptus seed. The seed in question, in the proportion of 2 ozs. of a species obtained from Hazára now believed to be *E. tereticornis*, and ¼ oz. from trees growing near the Montgomery Hall, probably *E. resinifera*, was sent out to 31 districts in February 1881, accompanied by a Memo. by Dr. W. Schlich, Conservator of Forests, Punjab, on the sowing and raising of Eucalyptus. In November 1881 a Memo. was addressed to each of the District Officers to

whom seed had been sent, asking for a report on the results. Replies have been received from 19 districts only. The following are brief extracts from some of the replies received:—

Deputy Commissioner, Jhang.—The Eucalyptus seed came up very well, and there are now some hundreds of young plants which I hope soon to plant out about the station.

Deputy Commissioner, Mooltan.—The Eucalyptus seed was sown according to directions, but it proved a total failure. This is the second time the experiment has been made without success. Seeds are going to be sown a third time now; the results will be reported.

Deputy Commissioner, Hoshiárpur.—Believes the seed to have been very good. Large quantities of seed have been received from Hazára, and have always done well.

Extra Assistant Commissioner, Gujránwála.—The Eucalyptus seed was made over to the gardener for experimental sowing, and his instructions were duly explained to him. The seeds were sown in earthen pots, but did not germinate; this unfavourable result may probably be attributed to the carelessness and ignorance of the gardener, who has been replaced by another gardener.

Deputy Commissioner, Kángra.—States that it will be observed from copies of letters sent from the Secretary, Tea Planters Association, Pálampur, and also from the Assistant Commissioner, Kulu, that the experiment failed at both those places.

Extract from letter from Assistant Commissioner, Kulu, to Deputy Commissioner, Kángra.—The Assistant Commissioner saw that the instructions were carried out as far as the time, when the seeds were received, would permit and the seed germinated, but nothing more. It appears to the Assistant Commissioner that the production of this tree in the lower parts of Kulu requires extreme care and attention such as the gardener at Sultánpur is not qualified to bestow.

Extract from letter from Judicial Assistant Commissioner, Kulu, to Deputy Commissioner, Kángra.—I have planted and sown lots of them, and with success. The *E. globulus* grows best at an elevation of about 5,000 feet. The *resinifera* grows well in the plains, so does the *rostrata*.

Judicial Assistant Commissioner, Amballa.—Reports that the February sowing of Eucalyptus seed succeeded well. Sixty young plants of two species were reared, and have been planted out.

Judicial Assistant Commissioner, Rawalpindi.—I regret to say that I find on enquiry that the seeds did not succeed, and there are no plants to show for it. Whether this was due to defective sowing or to any inherent defect in the seeds I cannot say, but most probably the former is the true cause of failure, as I have found by experience that Eucalyptus seed possesses great vitality.

This district is specially favourable for Eucalyptus trees, and there are already a large number in the station of many years' growth, and there is no reason why there should not be many more.

Deputy Commissioner, Gurdáspur.—States that the seeds were made over to the Extra Assistant Commissioner, and were sown in 10 flower pots; 50 plants were the produce; of these, owing to excessive rain-fall, all but 10 plants died. These 10 are now about 2½ feet high. Some seed was again sown about the end of September; 100 plants were raised.

Assistant Commissioner, Montgomery.—Reports that the Eucalyptus seeds were sown in accordance with the directions contained in Dr. W. Schlich's Memo. on the sowing and raising of Eucalyptus, but that the result is a failure (as might be expected in such a soil and climate).

Deputy Commissioner, Gujrat.—States that Deputy Commissioner has experimented with some of the seed under his own personal supervision, and that the seeds came up, but that after growing to some 4 or 5 inches, one plant after the other died off.

Extract from Report by Honorary Superintendent Rám Bágh, Amritsar, to Deputy Commissioner, Amritsar.—From the seeds received there are 44 healthy plants from 18 to 21 inches high. The whole of the seeds germinated, but some plants suffered from the heavy rains. The experiment may be considered satisfactory.

From the above extracts it will be observed that, although the seeds supplied to each district were of the very same lots, the results obtained from sowings in the different districts were far from being alike. In six districts, *viz.*, Mooltan, Gujránwála, Rawalpindi, Montgomery, Shahpur and Muzaffargarh the seed is reported to have failed even to germinate, while in 13 districts the seed germinated, but the plants met with varying success afterwards, a great many having been destroyed by the excessive rain-fall.

Result of sowings of Hazára Eucalyptus seed in the Society's Garden.

6. In January 1882 I made careful sowings of Hazára Eucalyptus seed, in order to ascertain what number of plants could be raised from 2 ozs. of seed, the same quantity, and of the same lot from which distributions were made to the districts in February 1881. The

number of plants raised and transplanted into 5-inch pots is 1,282. Another sowing of 2 ozs. was made in February last. The number of plants raised from this sowing and recently transplanted is 1,159. This is a clear proof that if ordinary care be taken with good seed, a small quantity will suffice to raise a stock of plants; and, further, that the failure of the seed to germinate, reported from the districts above mentioned, was due to other causes than its germinating quality.

Large indents for Eucalyptus seed.

7. Single indents have occasionally been received for as much as *one seer* of certain species of Eucalyptus seed, which I need hardly point out is a much larger quantity than we are in a position to supply, and sufficient to sow a very large area.

Sowings of imported and acclimatized Eucalyptus seed in the Society's Garden.

8. Sowings of imported seed of different species, also acclimatized seed from Hazára and the Society's Garden, have been made at different times. And there are at the present time a large number of young plants available for distribution.

Eucalyptus seed from Australia.

9. Seed of a large number of species was obtained from the Directors of the Botanic Gardens, Adelaide and Melbourne, Australia. As several species are quite new to the garden, and, so far as I am aware, have never before been tried in the Province, I give below a complete list of the species now under cultivation :—

1.	Eucalyptus	amygdalina	...	Labill (*Peppermint tree or mountain ash*).
2.	Do.	bicolor *	...	A. Cunn (*Red iron bark or bastard box*).
3.	Do.	botrioides	...	Smith.
4.	Do.	capitellata.		
5.	Do.	cornuta	...	Labill.
6.	Do.	citriodora *	...	Hook.
7.	Do.	coccifera.		
8.	Do.	coriacea	...	A. Cunn.
9.	Do.	colossea	...	F. V. Mueller.
10.	Do.	calophylla	...	R. B. (*Red gum tree of W. Australia*).
11.	Do.	doratoxylon	...	F. V. Mueller (*Spear wood of S. W. Australia*).
12.	Do.	diversicolor	...	F. V. Mueller (*The Karri of S. W. Australia*).
13.	Do.	globulus	...	Labill (*Blue gum tree of Victoria and Tasmania*).
14.	Do.	gigantea.		
15.	Do.	Gunnii	...	Hook.
16.	Do.	gonicalyx	...	F. V. Mueller (*Bastard box of N. S. Wales and Victoria*).
17.	Do.	grossa.		
18.	Do.	gomphocephala	...	Candolle (*The Tooart of S. W. Australia*).
19.	Do.	hœmastoma. *		
20.	Do.	hemiphloia *	...	F. V. Mueller (*Box tree of Queensland, S. A. and N. S. W.*).
21.	Do.	icifolia.		
22.	Do.	leucoxylon	...	F. V. Mueller (*Iron bark tree of Victoria, S. A. and N. S. Wales*).
23.	Do.	longifolia	...	Link and Otts (*Wooly butt of Victoria and N. S. Wales*).
24.	Do.	Luchmannii.		
25.	Do.	maculata	...	Hook (*Spotted gum tree of N. S. Wales and Queensland*).
26.	Do.	marginata	...	Smith (*The Jarrah or Mahogany tree of S. W. Australia*).
27.	Do.	megacarpa.		
28.	Do.	melliodora	...	A. Cunn (*Yellow box tree of Victoria and N. S. Wales*).
29.	Do.	obliqua	...	L. Heritier (*Stringy bark tree of Tasmania*).
30.	Do.	pilularis	...	Smith (*Black butt tree of S. Queensland and N. S. Wales*).
31.	Do.	patens.		
32.	Do.	paniculata	...	(*White iron bark tree of N. S. Wales*).
33.	Do.	platypus	...	Hook (*Maalok of W. Australia*).
34.	Do.	do. nutans.		
35.	Do.	punctata.		
36.	Do.	polyanthemos	...	Schaner (*Red box tree of E. Australia*).
37.	Do.	piperita.		
38.	Do.	rostrata *	...	Schlecht (*Red gum tree of S. Australia*).

NOTE.—The species marked with an astorisk are recommended for cultivation in the plains.

39.	Eucalyptus resinifera *	...	Smith (*Red Mahogany tree of S. Queensland and N. S. W*).
40.	Do. robusta	...	Smith (*White Mahogany tree of N. S. Wales*).
41.	Do. regnans ?		
42.	Do. saligna	...	Smith (*White or grey gum tree of S. W. Australia*).
43.	Do. Stuartiana	...	F. V. Mueller (*Apple tree*).
44.	Do. siderphloia *	...	Benth (*White iron bark tree of N. S. W. and S. Queensland*).
45.	Do. tereticornis *	...	Smith (*Red gum tree of N. S. W. and S. Queensland*).
46.	Do. urnigera.		
47.	Do. viminalis	...	Labill (*Weeping gum Manna gum tree of N. S. W. and S. E. A.*
48.	Do. species	...	(*Flooded gum*).
49.	Do. do.	...	(From Hazára). *
50.	Do. do.	...	(From A. H. S. Garden).

With one or two exceptions seeds of all the species received from Australia have germinated freely, but several have a very delicate and unhealthy appearance. It is very doubtful whether they will survive the rainy season.

Carob (*Ceratonia siliqua*).

10. Our young stock of this tree was greatly diminished by the heavy rains in the autumn of 1881. We have, however, quite sufficient to meet all indents likely to be made; and as we have a large stock of seed on hand, there will be no difficulty in increasing the number. Upwards of 3,000 seedlings have been transplanted during the present month (June).

In last Report I mentioned that the experiment of propagating the carob by grafting (or inarching) would be attempted during the rainy season. This was done. Scions of a female tree were successfully inarched on stocks raised from seed. This experiment will be undertaken on a larger scale this year, and grafts made from both sexes of the tree. One advantage to be gained by this mode of propagation is the knowledge of the sexes of the plants. The tree being *diœcious*, the presence of flowers of both sexes is necessary for the production of fruit. It is also probable that by grafting (inarching) the plants will produce fruit at an earlier age, and of better quality than that produced by plants raised from seed.

Inga dulcis.

11. The plants raised from seed received from the Horticultural Garden, Lucknow, are doing well. A good supply of seedlings have also been raised from seed received under the name of Pithecolobium dulcis, from the Botanical Gardens, Calcutta.

Pithecolobium bigeminum.

12. This species, the bark of which is said to possess saponaceous properties, appear to be suited to this climate. The plants raised from seed received from the Calcutta Botanical Gardens in 1880 are all alive and healthy.

Olives.

13. The remainder of the wild olive stocks, alluded to in para. 13 of last Report, were budded in March 1882 with as satisfactory results as were obtained in the preceding year; out of 48 plants budded, 45 were succesful, and are doing well. The plants raised by budding in 1881 are also doing well, being now between 3 and 4 feet high and in a healthy condition. Efforts were made to procure a large supply of wild olive seed for stocks, but only about 1 lb was obtained from Kulu. These seeds have germinated freely.

Brachychiton.

14. Our stock of young plants of Brachychiton populneum and B. diversifolium, fine specimens of which are growing near the Conservatory, have been considerably increased during the year. There are now a number of healthy young plants available for sending out.

Prosopis glandulosa (Mosquit bean of Texas).

15. No additions have been made to the number of these plants, of which we have available between 3 and 400, in pots. Four of the plants that were planted out two years ago are now bearing a few pods for the first time. The trees are still flowering, from which it would appear that the pods are produced in successional crops. The same plants flowered freely during June, July and August last year, but did not produce any pods. The largest plant is now upwards of 20 feet in height, but they all still maintain their characteristic straggling appearance. It is intended next rainy season to try some of these plants on the large mounds in the garden. So far the farash (Tamarisk orientalis) and Agave Americana seem the only plants that will grow well on these sterile mounds.

NOTE.—The species marked with an asterisk are recommended for cultivation in the plains.

16. Several hundred plants of the Rain tree were raised from seeds received from Calcutta and elsewhere. The plants attained the height of 2½ feet, and continued to make satisfactory growth until the beginning of December, when they commenced to die off. Every plant, including those raised from seed sown in March 1881, succumbed to the late frosts in the latter part of February. From past experience it seems that the attempt to cultivate this tree in the Punjab for any practical purpose is useless.

Pithecolobium saman (Rain tree).

17. Thanks are due to Dr. King, Superintendent Botanical Gardens, Calcutta; Mr. Duthie, Superintendent Botanical Gardens, Saháranpur; Mr. J. Cameron, Superintendent Government Gardens, Bangalore; the Directors Government Botanical Gardens, Adelaide and Melbourne, for the large and varied collections of seeds sent to the Society during the year.

Seeds received.

The following are some of the principal new kinds of tree seeds sown, several of which have germinated :—

Acacia salicina.	Croton oblongifolium.	Kigelia pinnata.
„ cultriformis.	Diospyros embryopteris.	Sterculia colorata.
„ cyanophylla.	„ melanoxylon.	Sapindus rubiginosa.
„ itiaphylla.	Grevillea Banksii.	Shorea robusta.
„ leucophlœa.	Garuga pinnata.	Sapindus emarginata.
Cochlospermum gossypium.	Hæmatoxylon campechianum.	Terminalia citrina.

Distribution of plants.

18. 3,822 timber and ornamental trees were sent out during the year.

Fruit Tree Nursery.

Distribution of fruit trees.

19. The undermentioned fruit-bearing plants were sent out during the year 1881-82 :—

No.	Name.	Number of trees.	No.	Name.	Number of trees.
1	Almond	72			1,343
2	Apple	91	17	Litchi	4
3	Apricot	96	18	Mango, grafts	96
4	Bél (*Ægle marmelos*)	21	19	Mulberry	26
5	Citron	69	20	Nectarine	70
6	Date Palm (*Phœnix dactylifera*) ...	10	21	Orange	689
7	Fig	80	22	Papaya	10
8	Guava	25	23	Peach	377
9	Imli (*Tamarindus indicus*)	4	24	Phalsa (*Grewia Asiatica*)	11
10	Jaman (*Syzygium jambolanum*) ...	96	25	Pear	90
11	Kurounda (*Carrissa carandus*) ...	14	26	Plantain	315
12	Kamrac Averrhoa (*Carambola*) ...	18	27	Pummelow	82
13	Khirini (*Mimusops Kauki*) ...	2	28	Plum	277
14	Lemon	9	29	Pomegranate	162
15	Lime	417	30	Quince (*Cydonia vulgaris*) ...	16
16	Loquat	319	31	Vines	240
		1,343		Total ...	3,808

This number is 452 plants in excess of last year's distribution.

20. The amount realized from sales of fruit trees is less by Rs. 236 than in 1880-81. As explained in the Report for that year, Rs. 300 received from the Deputy Commissioner of Gujrat for plants to be supplied during 1881-82 was included in the amount shown as income from sale of trees in 1880-81.

Income from sales of fruit trees.

Efforts are now being made to increase our stock of fruit trees, some kinds of which, owing to damage done to young budded plants by the hail storm in 1881, is rather below the average, principally the different kinds of stone fruit.

Fruit tree nursery.

21. I have before pointed out the difficulty experienced in maintaining the nurseries in order with the present establishment. It is during the cold weather, when most of the propagating work has to be done, that the greater part of the nursery establishment are daily employed on lifting and despatching plants for outstations, and it is generally the end of March before indents are finished and we can commence to put our own nurseries in order. Provision has this year been made for an extra establishment, under a separate Chaudhri or mate, for lifting plants, &c., so as to interfere less with the regular establishment employed for ordinary routine work in the nurseries.

Arrangements are also being made to transfer by degrees the fruit tree nursery to another site, to enable the present one to be cleared and rearranged,—a work now much needed. This is the only plan by which the nursery can be more systematically arranged. In the early part of 1881, enquiry was made by the Deputy Commissioner of Lahore whether the Society would take over the plot of waste land near the Mall and opposite the main entrance to Government House grounds, and utilize it as a nursery. It was decided that, as the permanent establishment entertained was barely sufficient to carry on the routine of work, and that there being many parts of the garden to be improved and cultivated, the small sums sanctioned for extra labor should, for the present, be expended within the garden boundaries. A plot of land near the Superintendent's house has this year been levelled and planted with Malta oranges and cuttings of kinds.

Introduction of plantains.

22. Six plants of each of the undermentioned varieties of plantain, said to be the best under cultivation, were obtained from the Victoria Gardens, Bombay. The plants, which were despatched by steamer *viâ* Kurrachee, arrived in very fair order, but several died off after planting out. Those which survived are now strong and healthy. Efforts will be made to propagate them as quickly as possible.

The following are the varieties and number of plants of each :—

4. Mosk.	6. Elcha.
2. Hara.	1. Busray.
6. Pilla.	Lall, all died.

The variety named " Lall " appear to be a delicate one, and the suckers sent were too small for transplanting.

Another attempt will be made next season to introduce this variety.

Fruit.

23. As mentioned in para. 33 of last Report, the fruit-bearing trees suffered severely from the storm on the 18th March 1881. The crop was a very light one. As no contractor could be found willing to give a fair price for the fruit, it was decided to keep it and sell the different crops as they ripened. The closure of the canal too, at a critical period, was also very injurious to the different kinds of the Citrus family, many plants of which are growing in portions of the garden where it is impossible to irrigate by well water.

Kághzi limes.

24. The crop of kághzi limes was reserved for propagating purposes. There is always a considerable demand for this plant, the fruit of which always sell well. From the seed sown, 5,000 seedlings have been raised, and will be transplanted during next rainy season.

Loquats.

25. The grafted loquat trees, received from the Saháranpur Botanical Gardens in 1879, produced fair crops of fruit last season. The fruit is of good size, oblong in shape, fleshy, containing fewer seeds, and of superior quality to any of the kinds previously cultivated in this garden. Sixty grafts were made from these trees during the year.

Vegetable and Farm Culture.

Hot weather vegetables.

26. The vegetable crops grown during the hot weather of 1881 differed but little from those reported on last year. Most of them suffered more or less from the floods during July and August, and of several kinds, *viz.*, cucumber, melon, pumpkin, karela, kali tori, kudoo, and other country vegetables generally cultivated during the summer months, the quantity of seed collected was less than in the preceding year. Of several kinds of capsicum (lal mirch) and solanum (baingan) a good supply of seed was obtained.

Imported hot whether seeds for 1882.

27. A consignment of seeds for the summer of 1882 was imported from Vilmorin, Andrieux & Co., Paris, and arrived here in the beginning of March last. These seeds have proved to be of very good quality.

Peas.

28. Efforts were made during the cold season to increase our stock of acclimatized pea seed, which, as mentioned in last Report, had been greatly reduced by the unfavourable season of 1881.

The earlier varieties of peas succeeded best. Some of the later varieties were somewhat injured by the late frosts in the latter part of February last, which affected the flowers sufficient to prevent the production of seed.

I give below a list of varieties cultivated and the quantities of seed collected from each; the total, *viz.*, 924 pounds, is more than double the quantity harvested last year. The number of varieties are too many to cultivate for distribution; the object in view is to select a few varieties which prove to be best suited for early and late sowings in the Punjab, and to grow those varieties on a large scale for the production of seed.

The following table shows the varieties cultivated and quantities of seed collected :—

No.	Name of variety.	Quantity of seed collected.	No.	Name of variety.	Quantity of seed collected.
1	Pea, extra early, French dwarf ..	38 pounds.			468 pounds.
2	,, Carters, first crop	134 do.	12	Pea, Dickson's first and best ...	19 do.
3	,, Fortyfold	63 do.	13	,, Princess Royal, improved ...	90 do.
4	,, Daniel O'Rourke	21 do.	14	,, Ringleader	80 do.
5	,, Extra early French	52 do.	15	,, Black eyed	60 do.
6	,, Blue Prussian	33 do.	16	,, Sutton's improved, early dwarf ...	36 do.
7	,, Early dwarf Brittany ...	15 do.	17	,, Dickson's favourite	58 do.
8	,, Prizetaker	62 do.	18	,, Sutton's improved, early champion	24 do.
9	,, Hundredfold	28 do.	19	,, ,, green early emerald gem	24 do.
10	,, Tom Thumb	14 do.	20	,, ,, Knight dwarf marrowfat	16 do.
11	,, McLean's wonderful	8 do.	21	,, various	49 do.
		468 do.		Total ..	924 do.

Turnips.

29. Four varieties of turnip, two white and two yellow fleshed, were grown from imported seed, *viz.*, Sutton's golden stone, Sutton's orange jelly, Sutton's early six weeks, and white stone or stubble. With the object of ascertaining what effect different quantities of manure would have on the crops, and whether any of the varieties would be induced to produce seed, an acre of land was divided into 12 plots of 400 square yards each, and each of the four varieties of turnip were sown in three plots, each plot having been manured with varying quantities of decayed city refuse from the municipal pits. Plot No. 1 was manured with 35 maunds, or at the rate of 420 maunds per acre; plot No. 2 with half that quantity, or at the rate of 210 maunds per acre; and plot No. 3 was left unmanured. Each of the remaining 3 sets of 3 plots were treated in the same manner. In each case the heaviest-manured plots produced the earliest and subsequently the largest turnips, but they were the first to commence to decay. The plots manured at the rate of 210 maunds per acre produced turnips of good size and of excellent quality. Golden stone, white stone and orange jelly were remarkably good, the roots being solid, clean and well formed. The early six weeks is one of the quickest growing turnips known. I noticed, however, that the roots rapidly decayed after arriving at maturity. The roots produced by the unmanured plots were small, but firm and well suited for table use. I have frequently seen crops of turnips rendered almost useless for all culinary purposes owing to the ground in which they were grown having been too heavily manured. Where manure is plentiful and close at hand, the native gardener often overmanures his turnip plots. Examples of this may be seen at any of the shows held by the Society, at which badly shaped, soft, overgrown turnips are annually exhibited. At the last show, held on the 8th April 1882, there were upwards of 30 exhibitors of turnips. Some of the specimens were of good quality, but the majority were overgrown, and of inferior quality. Specimens of each of the above four named varieties, grown in the Society's Garden, were exhibited, and were pronounced by the Judges to be the best at the show.

It was partly to ascertain what quantity of manure it is advisable to apply to land, to produce good turnips, that I made this experiment, and I have arrived at the conclusion that, if the land be of fair quality, unless the crops are cultivated for feeding cattle or some other special purpose where weight is considered of more importance than quality, manure at the rate of about 210 maunds per acre is quite sufficient. I found by weighing the contents of some of the manure carts that between 14 and 15 maunds is the average weight of a load, so that it takes about 15 ordinary bullock cart loads per acre to manure at this rate.

Specimens of the best turnips in each of the 12 plots were left for seeding purposes; some roots were also transplanted; the plants flowered freely, but no seed of any value was collected.

The greater portion of the crop of turnips was used for feeding the garden cattle. The remainder, with the exception of those left for seed, were sold. As I have before remarked, I have never considered the seed produced by turnips raised from imported seed of sufficient value to sacrifice a crop of good roots. In future any attempt to acclimatize turnip seed will be conducted on a very small scale. The turnips produced by acclimatized seed, although coming into use earlier, are far inferior to the produce of imported seeds.

American oats and wheat.

30. In last year's Report I gave descriptions of two kinds of oats and two of wheat, distributed by the Department of Agriculture of Washington, United States, and received through the Revd. E. Wherry, of Ludhiana. As the close of the season was by no means favourable to the experiments, I omitted to give the yield of the different varieties. This omission was noticed by the Punjab Government in its remarks on the Report above referred to. I now give a statement showing the area sown and yield of seed with which experiments have been made during 1881-82, the results of which are given in this Report:—

Table showing area sown and yield of American wheat and oats, season of 1880-81.

Area of plot.	Quantity of seed sown.	Name of crop.	Mode of cultivation.	Date of sowing.	Date of reaping.	Actual outturn of plots.	Yield per acre, omitting fractions.	
	lb.					lbs.	Maunds.	Seers.
100 square yards	1	Oats, Board of Trade	Plots lightly manured; seed sown broadcast.	25th Novr. 1880.	17th May 1881.	8	4	32
Do.	1	Oats, winter, red rust proof.	Do.	Do.	12th May 1881.	16	9	24
Do.	1	Winter wheat, white, Australian.	Do.	Do.	Do.	10	6	..
Do.	1	Winter wheat, "Victor."	Do.	Do.	17th May 1881.	2	1	8

Experiments with manure.

31. In accordance with the request of the Deputy Commissioner of Lahore, experiments were commenced last autumn to test the value of manure, the object being to ascertain whether or not it is advisable to use a certain quantity of common manure for staples of the Province. The land available in the garden for experimental purposes being very limited, the area of the different plots selected for the experiments is 400 square yards, or $\frac{1}{12}$th of an acre,—an area considered to be sufficient to give reliable results. These plots were treated with varying quantities of common manure obtained from the municipal pits. The plots have been numbered, and are set aside for future experiments. A record will also be kept of the treatment of each plot.

This is the first attempt that has been made in experimental manuring. It is hoped that by a systematic arrangement some useful information may be obtained.

For these experiments land was selected that had received previous similar treatment; the same kind of manure was used in each plot.

This year it is intended to use some artificial or other manure against that now available.

Each of the experiments were carefully carried out. The actual results are given in the following table:—

STATEMENT showing RESULTS of MANURE EXPERIMENTS in the cultivation of WHEAT and OATS.

Area of plots.	Quantity of seed sown.	Mode of cultivation.	Manure applied, and rate per acre.	Date of sowing.	Date of reaping.	Number of times irrigated.	Name of crop.	*Actual out-turn of plot.*				*Yield per acre.*			
								Grain.		Straw.		Grain.		Straw.	
	lbs.							Mds.	S.	Mds.	S.	Mds.	S.	Mds.	S.
$\frac{1}{12}$th of an acre	5	Land well ploughed; seed sown broadcast.	City sweepings @ 400 maunds per acre.	27th Novr. 1881.	5th May 1882.	6	Winter oats, "Red rust proof."	1	6	6	20	13	32	78	0
Ditto	5	Ditto	Do. @ 200 Mds.	Ditto	Ditto	6	Ditto ...	1	0	5	0	12	0	60	0
Ditto	5	Ditto	*Nil*	Ditto	Ditto	6	Ditto ...	0	30	4	20	9	0	54	0
Ditto	5	Ditto	Do. @ 400 Mds. per acre.	Ditto	Ditto	6	Oats, "Board of Trade" ...	0	30	7	0	9	0	84	0
Ditto	5	Ditto	Do. @ 400 Mds.	Ditto	Ditto	6	Winter wheat, "White Australian."	0	13	1	0	3	36	12	0
Ditto	5	Ditto	Do. @ 400 „	Ditto	25th April 1882.	6	Huskless or wheat barley	2	0	4	0	24	0	48	0
Ditto	5	Ditto	Do. @ 200 „	Ditto	Ditto	6	Ditto ...	2	12	3	10	27	24	39	0
Ditto	5	Ditto	*Nil*	Ditto	Ditto	6	Ditto ...	1	26	2	35	19	32	34	20
Ditto	5	Ditto	Do. @ 400 Mds.	Ditto	Ditto	6	Wheat Vadának ...	1	32	3	30	21	24	45	0
Ditto	5	Ditto	Do. @ 200 „	Ditto	Ditto	6	Ditto ...	1	20	3	20	18	0	42	0
Ditto	5	Ditto	*Nil*	Ditto	Ditto	6	Ditto ...	1	14	2	0	16	8	24	0

It will be observed that the wheats received from America are entirely unsuited to the plains of this Province.

The variety named "Winter Victor" is a complete failure this year.

The variety named "Winter wheat, white Australian," yielded only at the rate of 3 maunds 36 seers grain, and 12 maunds bhúsa per acre, while Vadának wheat, sown under exactly similar conditions for sake of comparison, yielded 21 maunds 24 seers grain, and 45 maunds bhúsa per acre.

Huskless or wheat (barley).

32. The seed of the variety named "Huskless or wheat barley" was received from the Private Secretary to Sir Robert Egerton for experimental cultivation in the garden with a view to its acclimatization in the plains.

The variety was brought to notice by Captain Pogson, who found it at Kotgarh, in the Simla District. The yield of this variety, both in grain and straw, as will be seen from the table given, is larger than the yield of either of the other varieties tried. The yield from the heaviest manured plot being 24 maunds grain and 48 maunds straw per acre. The plot manured at the rate of 200 maunds per acre produced at the rate of 27 maunds 24 seers grain, and 39 maunds straw per acre. Of oats the variety named "Red rust proof" gave the largest outturn, as it also did in 1881. This variety yielded at the rate of 13 maunds 32 seers grain, and 78 maunds straw per acre The yield of oats "Board of trade" being at the rate of 9 maunds grain and 84 maunds straw. The plants in this plot averaged upwards of 6 feet in height. The grain of the "Huskless or wheat barley" harvested is of an inferior description to the seed sown, it is small and discolored, having the appearance of being over-ripe. Further experiments will be made with this variety during the current year. Earlier sowings will be made to enable the crop to mature and be cut before the heat in the plains is so great.

Several other plots of 400 square yards have been set aside for Indian corn, Sorgho and other crops, the results of which will be duly reported.

Minnesota early amber-cane.

33. In the latter part of June 1881, a small quantity of seed of "Minnesota early amber-cane" was received from the Secretary to Financial Commissioner, Punjab, for trial in the Agri-Horticultural Society's Gardens. The seed was sown on the 9th July in a small plot of carefully prepared soil. The seed germinated well four days after sowing. The plants continued to make slow growth until the latter part of August; from that time they gradually lost their healthy appearance and rapidly decayed. I attribute this failure chiefly to the excessive rain-fall in the latter part of July and during August. The seeds were received rather late in the season, and owing to the heavy rains the seeds could not be sown before the date above mentioned. The plants did not attain a height of more than 3 feet, and did not produce flowers. Small plots of Imphee and Sorgho were sown on the same date alongside the Minnesota; these two varieties were also failures.

The "Minnesota early amber-cane" is described as a variety of Sorghum saccharatum, which the United States farmers have ascertained to be the best kind for producing syrup and crystalized sugar.

Having seen this variety mentioned in the seed list of Vilmorin and Cie, of Paris, I sent an indent for 5 lbs. of seed; but on the recent arrival of the consignment of hot weather seeds, I was disappointed to find that it had been omitted. I anticipated making another trial this season, but unless seeds are procurable in this country, I shall not be able to do so.

Canary seed (Phalaris canariensis.

34. In the commencement of the cold weather about half an acre of land was sown with canary seed. The crop succeeded well, and was cut in April last, the produce being 2 maunds of cleaned seed. Frequent applications having been received for canary seed, a sowing was first made here in 1876; small sowings have since been made annually, but the seed was found to have degenerated. Last year fresh seed was imported from France. The crop now harvested is the produce of that seed, and is of very good quality.

Cotton Louisiana.

35. In the latter part of March a plot of ground of about one-third of an acre was sown with imported seed of Louisiana cotton. The land had been recently levelled, and was unmanured. Picking commenced on the 15th September, and continued to the end of December. The yield of uncleaned cotton was 60 seers.

Lucerne (Medicago sativa).

36. During the year a large supply of seed of this valuable fodder plant was imported, the increasing demand for which shows that its cultivation is extending every year. It is without doubt a most useful crop to cultivate. A good cutting may be obtained within three months from date of sowing. During the cold weather the crop makes rather slow growth. A cutting may, however, be depended upon about every month from February to September. The plants should not be allowed to flower; and care should be taken to secure good drainage during the rainy season; if lodgement of water is allowed for any length of time, the plants are liable to rot-off.

Prickly comfrey (Symphytum asperrimum).

37. A stock of about 200 plants of this once highly recommended forage plant for India has been kept up in pots, but very few indents have been received. This is doubtless due to the disappointment experienced by several cultivators who imported and tried the plant when it was first advertised. The plant is easily propagated by division of the root, and a stock could quickly be raised if there was any demand.

Implements.

In October last a modified "Kaisar" plough was presented by the Officiating Director, Department of Agriculture and Commerce, North-Western Provinces and Oudh. The plough is of a later pattern to those reported on last year, all of which, I should mention, were made at the Cawnpur Farm Workshop. The plough last received is a modification of the one received through the Financial Commissioner, Punjab, last year. The only defects I notice in its make are (1) that there is not sufficient space left for adjustment of the beam to suit the different heights of the bullocks working it, or the nature of the soil being ploughed; (2) the handle is a few inches too short. When working with small sized bullocks, the first defect is not noticed; but by all the ploughmen that worked the plough at different times, the second was complained of. These defects can easily be remedied.

No other implements have been received during the year.

Flower Culture.

Roses.

38. Budding wood of some 50 named varieties of roses were received from the Ram Newas Garden, Jeypore, in exchange for wood of a similar number of varieties sent from this garden. Out of the 50 varieties received, about 40 proved successful.

As mentioned in last Report, a plant of each variety of rose at that time available has been planted out in parallel lines in a plot of ground adjoining the potting yard.

The varieties are now so numerous that, for want of sufficient space in any one portion of the garden, cuttings have had to be put down in many different parts. Arrangements will be made, when rearranging the nurseries, to gradually collect, as far as practicable, the roses in one portion of the garden, and so lessen the trouble in executing indents received for a large number of different varieties.

Income from sales of rose plants.

39. 1,944 rose plants were sent out during the year. The amount realized from this source amounted to Rs. 944 against Rs. 346 for the preceding year. This great increase is owing to most of the plants sent out being English varieties, propagated from plants imported by the Society at considerable expense during the past few years, and offered for sale this year for the first time.

Cold weather annual flowers.

40. In last year's Report I gave a list of cold weather annual flower seeds collected. In addition to those varieties, seed of the undermentioned have been collected this year. The season having been a favourable one, the seeds harvested are of good quality, and much in excess of the quantity collected last year:—

Adonis flos.
Aster, two varieties.
Agrostemma dwarf fringed rosea.
Browallia elata cœrulea.
Centaurea Cyanus.
Coreopsis picta, or Drummondii.
Do. tinctoria.
Campanula carpatica.
Eschscholtzia californica alba rosea.
Eutoca viscida.
Gilia lacinata.
Iberis, white rocket.
Linum grandiflorum rubrum.
Malcomia maritima compacta rosea.
Do. do. do., alba.
Nigella Hispanica atropurpurea.
Nolana atriplicifolia.
Silene orentalis or compacta.
Stock, German ten weeks, mixed.

Introduction of new annuals.

41. The following new annuals were introduced and cultivated during the year:—

Agrostemma coronaria atrosanguinea.
Browallia Czerwiakowskii.
Callirhoe involucrata.
Colutea floribunda album.
Celosia cristata variegata japonica.
Datura Wrighti (meteloides).
Dianthus latifolius, dark red.
Delphinium ranunculus flowered.
Erysium pulchella,
Gilia laciuata.
Do. capitata.
Gypsophila Stevenii.
Ipomœa hederacea.
Schizanthus oculatus pyramidalis compacta.
Viscaria oculata cœrulea.

Bulbs and tuberous roots.

42. A collection of bulbs and tubers were imported from Messrs. Carter & Co., London. With the exception of a few hyacinths and anemones, all arrived in very good order. Some of the gladiolus, amaryllis and ranunculus produced fine flowers in the beginning of April.

Imported Seeds.

These were obtained from the same Firms as in 1880. The principal portion of the flower and vegetable seeds were from Vilmorin, Andrieux & Co., Paris, and Sutton & Sons, London. A small consignment of various seeds was also purchased from Chas. Lorenz, Erfurt, Germany.

The results on the whole were not so satisfactory as reported last year. Some varieties of flower seed from Vilmorin & Co. failed to germinate, although repeated sowings were made. Of the vegetable seeds, carrot, lettuce, leek and onion were unsatisfactory. French and German seed of the three last-named kinds were complete failures in this garden.

The English lettuce seed germinated moderately; the onion seed also failed. The pea seed imported from France to make up the deficiency of the acclimatized crop harvested in 1880 was far from satisfactory. The difference in the germinating power of this and the acclimated seed was very marked.

Complaints were also received from some of the districts regarding the germination of certain kinds of imported seed. Seeds of beet, cabbage, cauliflower, turnip, and all the principal kinds of the Brassica tribe that were sown in the Society's Garden, gave good results.

It is probable that the great humidity of the atmosphere, caused by the excessive rainfall at the time the seeds were distributed, may have had an injurious effect on their germinating qualities.

In several instances I observed that the early sowings of such kinds as cauliflower, turnip, beet, cabbage, &c, were completely destroyed by the heavy rains, although the seeds had germinated freely.

In 1879 I wrote a "note on the sowing and germination of imported seeds" for distribution with the supplies of seeds sent out, and I pointed out the great loss of seed caused by sowing too early. I have since then been a close observer of the results of early sowings of imported seeds, and I still see no reason to differ from what I then wrote.

Looking at the manner in which seeds raised in Europe are frequently treated in this country, and the conditions under which they are sown, it is not surprizing that many fail. There is no doubt that the natural risks of failure are greatly increased by the neglect and ignorance of the gardeners to whom purchasers frequently entrust their seeds.

Of course there are sometimes seeds, as, for instance, those kinds to which I have above alluded, that will not germinate under any conditions, however favourable; they having from some cause, climatic or other, lost their vitality. Still there is no doubt that far more satisfactory results would be obtained by many, were a little more care paid to the way in which seeds are kept from the time of receipt to the time of sowing, and the manner in which the latter operation is carried out.

Shrubs, Creepers and other Plants.

Diplothemium maritimum.

43. The number of plants of the Wine Palm of Brazil, raised from seed received from the Conservator of Forests, Punjab, in 1880, remain the same as last year, *viz.*, 29. The plants, like most others of the same class, have made very slow growth.

A number of new plants have been raised during the year, chiefly from seeds received from other public gardens in India.

The following are some of the principal kinds which are so far doing well:—

Acacia cultriformis.
" cyanopylla.
" leucophlæa.
" salicina.
Bauhinia triandra.
" Valhii.
Hakea saligna.
Hardenbergia compotonia.
" monophylla alba.
Hibiscus trilobus.
" tiliaceous.
Jatropha podagrica.
" curcas.
Jatropha gossyphifolia.
Melaleuca incana.
Poivrea coccinea.
Stephania hernandifolia.
Sida molis.
Solanum marginatum.
" capsicastrum.
" Hendersonii.
" nigrum.
" hœmastocarpum.
Templetonia retusa.
Tinospora cordifolia.

44. A good deal has lately been written relative to the cultivation of the Manilla hemp plant in India. In May 1881 an enquiry was made by the Secretary to the Financial Commissioner, Punjab, as to whether the plant would probably be a commercial success as a fibre plant in the Punjab climate. So far as I am able to ascertain, the plant has never been introduced into this garden. I am, therefore unable to say whether it would, or would not, grow in the Punjab, but the results of trials made with the plant in other parts of the country lead one to consider that the Punjab climate is totally unsuited for its cultivation.

Musa textilis (Manilla hemp plant).

Dr. King, Superintendent Botanical Garden, Calcutta, writes "that Musa textilis, although several times tried in the Botanical Gardens, has invariably failed even to grow, the apparent reason being that the cold season at Calcutta is too great for it." It is therefore reasonable to consider that the cultivation of the plant so far north as the Punjab is hopeless.

Application for a few plants for trial in this garden were made to the Agri-Horticultural Gardens, Madras, and the Botanical Gardens, Calcutta, but at neither garden were plants then available.

45. In September last an application was received from the Superintendent Botanical Gardens, Saháranpur, for a supply of seed of "Withania coagulans,"—a plant which amongst other qualities is said to possess that which admits of its substitution for rennet in the manufacture of cheese. Seeds were obtained from the Deputy Commissioners of Dera Ghází Khan and Muzaffargarh, in both of which districts the plant is abundant, and forwarded to Saháranpur.

Withania coagulans (Panir).

A sowing has also been made in the Society's Garden.

Distribution of plants, seeds, &c.

The number of plants sent out during the year shows a considerable decrease compared with the number sent out in 1880-81, which, as explained in the Report for that year, was abnormally high, by reason of the large number of creepers, shrubs and common plants suitable for hedges having been sent to districts, and for planting out at the different stations on the Indus Valley State Railway.

The following table shows the number of plants, seeds and cuttings sent out from the gardens during the past three years :—

No.	Particulars.	Year, 1879-80.	Year, 1880-81.	Year, 1881-82.
1	Forest and ornamental trees	3,596	5,060	3,822
2	Shrub and creeping plants	4,678	13,805	6,704
3	Herbaceous and annual plants	3,057	3,614	1,044
4	Cuttings	5,060	2,273	1,312
5	Bulbs and tubers	232	332	620
6	Fruit trees	3,078	3,357	3,809
7	Rose plants	2,069	2,345	1,944
8	Seeds (imported parcels)	179	170	208
	,, (acclimatized)	547	521	581
9	Peas (pounds)	484	450	576
10	Tree seed parcels	33	69	20
11	Lucerne and Lawn grass seed (pounds)			128

46. The list of various places to which seeds and plants were sent is much the same as given in last year's Report, and need not be here recapitulated.

List of places to which seeds, plants, &c., were sent.

Income from sales of plants, seeds, &c.

The estimated income from sales of plants, seeds, flowers, grass, &c., for the year 1881-82 were Rs. 3,500. The actual receipts were Rs. 4,477, being an increase over the Budget-Estimate of Rs. 977.

The usual comparative statement showing the income under each head is appended.

The principal increases and decreases, compared with the preceding year, are as follows :—

						Rs.
The receipts from sales of plants and trees were more by ...					...	35
"	"	plants in pots	...	...	...	146
"	"	seeds	...	...	...	535
"	"	rose plants	...	...	...	598
"	"	timber and loppings ...		...	...	103
"	"	grass sold	...	...	...	32
The receipts from sales of cut flowers were less by				...	...	28
"	"	fruit trees	...	...	...	236
"	"	grazing cattle	...	...	...	208
"	"	fruit	...	...	...	104
"	"	sugar-cane	...	...	...	80

The increase under head "seeds" is due to larger sales, a larger consignment having been imported than in the preceding year. There is a decrease under head "subscriptions." Some subscribers, when asked for their subscriptions at the commencement of the year, are uncertain whether they will or will not require seeds, and fail to send in their subscriptions. When the season for sowing comes round, they purchase such seeds as they may require; hence it is that there is every year fluctuations under the heads of "subscriptions" and "seeds." The great increase from sales of rose plants has already been explained, also the apparent decrease from sales of fruit trees.

Income from grazing.

47. The decrease under head "grazing" is due to much less land being available for the purpose than in preceding years, owing to the cricket ground and other portions of grass land previously used during the summer months for grazing cattle having been utilized for other purposes.

For some seasons past the income from this source has been considerable; in 1880-81 it amounted to Rs. 403.

On the other hand, it is impossible to admit a large number of cattle without damaging the plants and disfiguring the garden, in spite of the care taken to prevent it. It is a question to be decided by the Committee to what extent the gardens are to be used for grazing purposes.

No sugar-cane was sold during the year; a portion of the crop grown was used as fodder for the garden cattle; the remainder was reserved for planting. One acre has been planted this season.

Miscellaneous.

Wells.

48. There are four wells in the garden, one near the garden office, one in the vegetable garden, one near the quarters lately built for the Lawrence Hall police guard, and one near the Superintendent's house. Of the four wells the last mentioned is the only one made by the Society; the others are old wells that were taken over with the land when the gardens were first formed.

During the year two wells, one near the office, the other near the Superintendent's house, both of which were in bad order, were put in good repair at a cost of about Rs. 120, exclusive of timber supplied from the gardens.

The other two wells remain to be repaired during the current year. The one in the vegetable garden need a complete set of new wheels.

The one near the police guard, which has not been worked for several years, need, besides a Persian wheel, considerable masonry repairs. The cost of putting the two wells in good repair will probably be not less than Rs. 200.

Conservatory.

49. The conservatory, which was very much out of repair, has been reglazed, repainted and covered with new chicks. A portion of the brick staging was carried away by the flood in July 1881, and had to be rebuilt. The cost of this work, which was done under the supervision of Rái Kanyha Lál, Executive Engineer, amounted to Rs. 570-13-7.

Horticultural show.

50. A successful show of flowers, vegetables and fruit was held on the 8th April 1881. Vegetables were well represented, there being upwards of 30 competitors in the different classes. Cut flowers, as in previous years, were not very good, excepting roses, of which some very good flowers were exhibited, but they lacked variety. The show of plants in pots was much the same as in preceding years.

Prizes amounting to Rs. 221, were awarded.

Garden school.

51. The average attendance of boys at the garden school was the same as last year (15). Of these lads, ten are between 15 and 20 years of age, and receive wages varying from Rs. 2-8-0 to Rs. 5-0-0 per month according to their efficiency in garden work. One lad has been in the garden upwards of 8 years, the other 9 have served between 2 and 5 years. Five boys are between 13 and 15 years of age, and have attended the school from 1 to 2½ years, receiving wages varying from Rs. 2 to Rs. 2-8-0 per month. One young máli, previously taught in the garden school, has for the past 2 years been in charge of the vegetable garden, and has worked well. Another has recently been placed in the nursery; both know English sufficiently well to read and write the names of plants, &c., which is all that is required for their profession. Two other of the elder lads, at present employed in the seed department, are now about to be transferred to practical garden work only. It has been found desirable to teach the boys, only sufficient to enable them to read and write numbers and labels; if more is taught, then they are induced to seek more lucrative employment in Printing Presses and other offices.

Models of English vegetables.

52. In the early part of 1881 Messrs. Sutton and Sons, of Reading, were asked what the cost would be of a similar collection of models of English vegetables as they had then recently sent to the Agri-Horticultural Society of Calcutta. The Firm replied that they would have pleasure in making up a collection of models of English vegetables suitable for cultivation in the Punjab, and presenting it to the Society. The case arrived here in May last. It contains about 40 exceedingly well modelled specimens of different varieties of asparagus, Brussels sprouts bean, beet, cucumber, cauliflower, carrot, cabbage, turnip, tomato, leek and onion. It would be interesting, for the sake of comparison, to procure a collection of models of Indian vegetables.

Specimens of permanent pasture grasses.

53. The same Firm has also presented to the Society a collection of 50 varieties of permanent pasture grasses. The specimens are all neatly labelled, giving the botanical and local names, and mounted in a glass case.

Library.

54. The undermentioned books, pamphlets, &c., have been received at the Society's Garden Library during the year:—

1. The Indian Agriculturist for 1881.
2. The American Agriculturist for 1881.
3. The Indian Forester, Vol. VII.
4. The Gardeners' Chronicle.
5. Journal of the Asiatic Society of Bengal.
6. Proceedings do. do. do.
7. Do. of the Agri-Horticultural Society of Madras.
8. Report on the Arboricultural Operations in the North-Western Provinces and Oudh, during the year ending 31st March 1880.
9. Report on the Cotton Production and Trade of the North-Western Provinces and Oudh, during the year ending 31st March 1881.
10. Report on the Cawnpur Experimental Farm Operations during the *rabi* season, 1880-81.
11. Report on the Progress and Condition of the Government Botanical Gardens, at Saháranpur and Mussoorie, for the year ending 31st March 1881.
12. Report on the Horticultural Gardens, Lucknow, for the year ending 31st March 1881.
13. Annual Report on the Foreign Trade of the North-Western Provinces and Oudh, during the year ending 31st March 1881.
14. Report on the Operations at the Experimental Farm, Cawnpur, for the *kharif* season, 1880.
15. Report on the Progress and Condition of the Royal Gardens at Kew, during the year 1880.
16. Report on the Administration of the Department of Agriculture and Commerce, North-Western Provinces and Oudh, during the year ending 31st March 1881.
17. Report on the Railway Borne Trade of the North-Western Provinces and Oudh, during the year ending 31st March 1881.
18. Report on the Foreign Trade of the North-Western Provinces and Oudh, during the year ending 31st March 1880.
19. Returns of the Railway Borne Traffic of the North-Western Provinces and Oudh, for quarter ending 30th June 1880.
20. Report on the Arboricultural Operations in the North-Western Provinces and Oudh, during the year 1880-81.
21. Report by the Committee of the Agri-Horticultural Society, Madras, for the year 1880-81.
22. Report on the Government Cinchona Plantations in Bengal, for the year ending 31st March 1881.

23. Memorandum on Materials in India suitable for the manufacture of Paper, by L. Liotard.
24 Memorandum on Dyes of Indian Growth and Production, by L. Liotard.

Catalogues, &c.

1. Carters' Vade-Mecum for 1882.
2 Carters' Catalogue of Farm seeds for 1881.
3 Price list of plants and seeds procurable from the Government Botanical Gardens, Saháranpur and Mussoorie.
4 Priced list of ornamental plants, shrubs, trees and climbers in the garden of the Agri-Horticultural Society of India, Alipore
5. Catalogue of trees, shrubs, ornamental plants and fruit trees for sale in the Horticultural Garden, Lucknow.
6 Catalogue of flower and vegetable seeds, offered by Chas. Lorenz, Erfurt, Germany.
7. General wholesale seed list from Vilmorin and Co., Paris
8. Sutton's Amateurs Guide in Horticulture for 1882.
9. „ Tropical Garden Guide.
10. „ Permanent Pasture Grasses.
11. „ Farmers' Year Book and Graziers' Manual, 1882.
12 Landreth's illustrated Catalogue of flower seeds.

List of the Principal Contributions received at the Gardens during 1881-82.

From Agri-Hoticultural Society, Alipore, Calcutta ...	Flower seed.
„ „ „ Madras ...	Do.
„ Bailey, Major, Conservator of Forests, Punjab ...	Tree seeds.
„ Cameron, J., Esq., Superintendent Government Gardens, Bangalore ...	Collection of tree and shrub seeds.
„ Coldstream, W., Esq., Deputy Commissioner, Hoshiárpur ...	Grafted mango plants, and cuttings of Ficus elastica.
„ Carter & Co., London ...	Collection of bulbs and tuberous roots (*purchased*).
„ Director of Agriculture and Commerce, North-Western Provinces and Oudh ...	Seeds of Reana luxurians.
„ Director Government Botanical Gardens, Adelaide	Collection of Australian shrub and tree seeds.
„ Director Government Botanical Gardens, Melbourne ...	Do.
„ King, Dr., Superintendent Botanical Gardens, Calcutta ...	Varied assortments of tree, shrub, creeper and other seeds.
„ Lorenz, Chas. Erfurt, Germany ...	Consignment of vegetable and flower seeds (*purchased*).
„ Mody, R. N., Mr., Lahore ...	Seeds of Carica papaya, and anona sanamosa.
„ Private Secretary to Sir Robert Egerton ...	Seed of Huskless or wheat barley.
„ Superintendent Government Botanical Gardens, Saháranpur ...	Collections of tree, shrub, creeper and other seeds.
„ Superintendent Government Gardens, Ganesh Khind, Poonah ...	Flower seeds.
„ Superintendent Horticultural Garden, Lucknow ...	Flower, vegetable and Pinus seed.
„ Sutton & Sons, Reading, England ...	Consignment of vegtable, agricultural and flower seeds (*purchased*).
„ Superintendent Ram Newas Garden, Jeypore ...	Budding wood of choice roses.
„ Vilmorin, Andrieux & Co., Paris (France) ...	Consignments of flower, vegetable, agricultural and tree seeds (*purchased*).
„ Webbe, F., Esq., Barout, Meerut ...	Tree seeds.

COMPARATIVE STATEMENT showing INCOME from each source for five years, 1877-78 to 1881-82.

	Amounts realized during														
	1877-78.			1878-79.			1879-80.			1880-81.			1881-82.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Imperial & Provincial *grants-in-aid* ...	9,000	0	0	9,000	0	0	9,000	0	0	9,000	0	0	9,000	0	0
Subscriptions from districts	4,368	0	0	4,258	0	0	3,888	0	0	3,888	0	0	4,248	0	0
Lahore Municipal Committee's grant for Lawrence Hall Gardens ...	1,542	0	0	1,542	0	0	1,542	0	0	1,542	0	0	1,542	0	0
Education grant ...	120	0	0	120	0	0	120	0	0	120	0	0	120	0	0
Indus Valley State Railway subscription ...	...	...	...	...	...	...	...	...	...	120	0	0	120	0	0
Cantonment Committee, Jhelum, subscription ...	...	...	...	...	...	...	...	...	...	...	...	...	240	0	0
Subscription (Members) ...	1,164	0	0	1,122	0	0	978	0	0	1,200	0	0	1,030	0	0
Advances recovered ...	537	0	0	648	0	0	452	0	0	765	0	0	1,202	0	0
Total Rs. ...	16,731	0	0	16,690	0	0	15,980	0	0	16,635	0	0	17,502	0	0
GARDEN PRODUCE.															
Plants and trees ...	580	0	0	695	0	0	416	0	0	472	0	0	508	0	0
Plants in pots ...	311	0	0	1,535	0	0	580	0	0	593	0	0	749	0	0
Cut flowers ...	99	0	0	63	0	0	181	0	0	219	0	0	191	0	0
Fruit trees ...	630	0	0	277	0	0	343	0	0	725	0	0	489	0	0
Dallies (vegetables) ...	178	0	0	107	0	0	86	0	0	142	0	0	133	0	0
Seeds ...	552	0	0	975	0	0	999	0	0	982	0	0	1,518	0	0
Rose plants ...	352	0	0	637	0	0	233	0	0	346	0	0	944	0	0
Grazing ...	356	0	0	238	0	0	399	0	0	403	0	0	194	0	0
Grass sold ...	23	0	0	72	0	0	60	0	0	32	0	0	74	0	0
Fruit ...	255	0	0	450	0	0	600	0	0	287	0	0	184	0	0
Timber and prunings ...	60	0	0	101	0	0	400	0	0	183	0	0	286	0	0
Indian corn ...	54	0	0	28	0	0	...	...	...	...	...	...	...	...	...
Sugar-cane ...	...	...	...	...	...	...	...	...	...	80	0	0	...	...	...
Tobacco ...	28	0	0	19	0	0	...	...	...	...	...	...	...	...	...
Rice ...	...	...	...	33	0	0	...	...	...	...	...	...	...	...	...
Tubs with plants for Viceroy's Camp ...	...	...	...	...	...	...	...	...	...	401	0	0	...	...	...
	3,478	0	0	5,230	0	0	4,297	0	0	4,865	0	0	5,270	0	0
Other items ...	58	0	0	117	0	0	10	0	0	182	0	0	367	10	10
GRAND TOTAL, Rs. ...	20,267	0	0	22,037	0	0	20,287	0	0	21,682	0	0	23,139	10	10

EDGAR SPOONER,

Supdt. Agri-Horticultural Society's Garden, Punjab.

II.—FINANCE.

I.—The year 1881-82 opened with a balance of Rs. 4,299. The balance estimated at close of year was Rs. 4,309. The actual balance was Rs. 4,359-3-2, or Rs. 50 in excess. This result is very favourable, considering that the estimate under expenditure has been exceeded by Rs. 809-7-1, principally due, as it will be observed, to the liberal estimate of Rs. 22,280 under head "Income," which was Rs. 1,690 in excess of the estimate for 1880-81, and Rs. 598 in excess of the actuals of that year, having been realized in excess by Rs. 860.

II.—The following table shows the estimates and actuals under the different heads of "Income" and "Expenditure" during the year 1881-82 :—

Income.	Estimates.	Actuals.	Difference.	Expenditure.	Estimates.	Actuals.	Difference.
	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.
I.—Grants-in-aid ...	13,368	13,368	...	A.—Establishment, permanent.	12,860	12,511	+349
II.—Lahore Municipal Committee's grant for maintenance of Lawrence Hall Gardens.	1,542	1,542	...	B.—Extra establishment...	600	710	+110
				C.—Plants and seeds ...	4,400	4,486	+ 86
				D.—Canal charges ...	500	475	- 25
III.—Subscriptions ...	1,320	1,390	+ 70	E.—Stores ...	950	855	- 95
IV.—Garden produce ...	4,800	5,419	+619	F.—Prizes at shows ...	350	300	- 50
V.—Advances recoverable	1,200	1,202	+ 2	G.—Land and buildings...	800	1,324	+524
VI.—Miscellaneous ...	50	219	+169	H.—Tools and implements	230	88	-142
				K.—Advances ..	700	1,232	+532
				L.—Books, periodicals, &c.	130	41	- 89
				M.—Printing, Stamps and Stationery.	500	539	+ 39
				N.—Expenditure not otherwise provided.	250	518	+268
TOTAL Rs. ...	22,280	23,140	+860	TOTAL Rs. ...	22,270	23,079	+809

The estimates for 1882-83, as per budget (Statement C. appended), are as follows :—

		Rs.
(a).	Estimated income	22,700
(b).	Do. expenditure	22,770
(c).	Do. balance on 31st March 1883 ...	4,289

The causes of the principal differences between the estimates and actuals for 1881-82 are briefly explained as follows :—

(1).—INCOME.

Garden Produce.—The increase of Rs. 619, under this head is principally due to some large orders received, about the close of the year, from the Native States of Bahâwalpur, Faridkot, Jamû and Kapûrthalla, and also from the Executive Engineer Punjab Northern State Railway, Rawalpindi, and the Honorary Secretary Quetta Club.

(2).—EXPENDITURE.

Establishment, Permanent.—The saving of Rs. 348 under this head is due to the great sickness which prevailed last autumn when several of the gardeners were absent on sick leave without pay.

Land and Buildings.—The estimate under this head has been exceeded by Rs. 524 owing to an expenditure of Rs. 570-13-7 for repairs to Conservatory, which had not been provided for in the estimate; but as the work was urgent, the late Honorary Secretary, Mr. G. R. Elsmie, authorized the expenditure.

Advances.—The excess under this head is principally due to the amounts advanced for carriage of large quantities of plants sent out to districts and the Indus Valley State Railway in March 1881, which were included in the accounts of the year under report. The expenditure under this head is nominal, as it is recoverable.

III.—GENERAL.

Members.—At the commencement of the year there were 86 names on the roll of subscribers During the year 5 new Members joined, 12 resigned and 2 died; thus there were, on the 31st March 1882, 77 Members on the roll, *viz.*—

75 Paying Members.
1 Honorary Member.
1 Life Do.

77 Total.

Of the Rs. 1,200 estimated for 1881-82, only Rs. 1,030 were realized as follows:—

						Rs.
28	Members,	@ Rs.	24	per annum =	... ...	672
28	Do.	@ „	12	„ =	... ...	336
3	Do.	@ „	6	„ =	... ...	18
1	Do.	... ...	...	... ...	...	* 4
				Total Rs.	...	1,030

The Cantonment Committee, Jhelum, was enrolled a subscriber to the Society during the year at Rs. 240 per annum.

Outstanding Debts.—Rupees 1,300 were estimated for recovery; Rs. 942 were realized, leaving a balance of Rs. 358 at close of 1881-82. Efforts will be made to realize this during 1882-83.

EDGAR SPOONER,

Supdt. Agri-Horticultural Society's Garden, Punjab.

* This was paid as subscription for one-third of the year by a 12-rupee Member, because for two-thirds of the year he was in England.

STATEMENTS.

STATEMENT showing the ACTUAL INCOME

Particulars of Income.	Estimated income for 1881-82.	April.			May.			June.			July.		
	Rs.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
I.—Grants-in-aid—													
1.—Imperial	5,400	450	0	0	450	0	0	450	0	0	450	0	0
2.—Provincial	3,600	300	0	0	300	0	0	300	0	0	300	0	0
3.—Local Funds	4,248	720	0	0	2,568	0	0	480	0	0	120	0	0
4.—Education	120	10	0	0	10	0	0	10	0	0	10	0	0
II.—Lahore Municipal Committee's grant for Lawrence Gardens.	1,542	128	8	0	128	8	0	128	8	0	128	8	0
III.—Subscriptions—Members	1,200	48	0	0	174	0	0	84	0	0	84	0	0
Do. Indus Valley State Railway ...	120	...		...	...	...	...	120	0	0	...	...	...
Do. Cantonment Committee, Jhelum	...	...	...	...	...	...	...	...	...	...	...	...	...
IV.—Garden produce	4,800	293	5	3	402	0	0	205	7	3	197	6	0
V.—Advances recoverable	1,200	21	0	9	266	5	6	164	4	0	4	7	3
VI.—Miscellaneous	50	79	0	0	1	0	0	...	...	...	...	...	...
TOTAL RUPEES ...	22,280	2,049	14	0	4,299	13	6	1,942	3	3	1,294	5	3

A. H. SOCIETY'S GARDEN OFFICE:
Lahore, the 1st April 1882.

A.

during the twelve months of 1881-82.

August.			September.			October.			November.			December.			January.			February.			March.			Total Income.		
Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
450	0	0	450	0	0	450	0	0	450	0	0	450	0	0	450	0	0	450	0	0	450	0	0	5,400	0	0
300	0	0	300	0	0	300	0	0	300	0	0	300	0	0	300	0	0	300	0	0	300	0	0	3,600	0	0
120	0	0	120	0	0	...	...	...	120	0	0	...	...	...	...	...	...	...	...	...	...	...	...	4,248	0	0
10	0	0	10	0	0	...	...	...	10	0	0	20	0	0	10	0	0	10	0	0	10	0	0	120	0	0
128	8	0	128	8	0	128	8	0	128	8	0	128	8	0	128	8	0	128	8	0	128	8	0	1,542	0	0
174	0	0	48	0	0	...	...	...	72	0	0	60	0	0	42	0	0	88	0	0	156	0	0	1,030	0	0
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	120	0	0
240	0	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	240	0	0
385	15	10	304	12	0	521	14	0	448	0	0	340	8	3	504	3	6	841	12	6	973	5	0	5,418	9	7
22	1	3	16	9	3	...	...	...	53	10	0	50	0	9	108	7	3	94	15	3	400	8	0	1,202	5	3
...	...	...	...	...	...	...	...	...	...	...	...	18	0	0	...	...	...	100	12	0	20	0	0	218	12	0
1,830	9	1	1,377	13	3	1,400	6	0	1,582	2	0	1,367	1	0	1,543	2	9	2,013	15	9	2,438	5	0	23,139	10	10

E. PENHEAROW.

EDGAR SPOONER,

Supdt. Agri-Horticultural Society's Gardens.

STATEMENT

STATEMENT showing the ACTUAL EXPENDITURE

Budget Heads.	Estimated expenditure in 1881-82.	April.			May.			June.			July.			August.		
	Rs.	Rs	A.	P	Rs.	A	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
A.—Establishment, Permanent—																
(*a*). Salary of Superintendent	3,900	325	0	0	325	0	0	325	0	0	325	0	0	325	0	0
(*b*). „ Accountant, &c.	840	70	0	0	70	0	0	70	0	0	70	0	0	70	0	0
(*c*). „ Lahore Establt....	8,000	666	2	9	633	7	6	644	6	6	634	0	0	650	11	0
(*d*). „ Kángra „ ...	120	120	0	0	...	...	...	...	...	...	...	...	...	...	...	...
B.—Extra Establishment—																
(*a*). Manual (Coolies) ...	400	...	...	...	50	2	0	...	...	...	35	10	0	31	0	0
(*b*). Cattle. Feed and purchase of—	200	8	0	0	22	12	6	13	0	0	...	...	...	21	12	6
C.—Plants and seeds—																
(*a*). Purchase ...	3,400	35	8	0	106	14	0	16	9	0	...	...	...	7	3	6
(*b*). Carriage ...	1,000	50	6	0	5	12	0	93	4	0	115	11	0	25	11	0
D.—Canal charges ...	500	...	...	...	256	15	3	...	...	...	217	12	6	...	...	...
E.—Stores—																
(*a*) Pots and manure ...	800	105	6	0	106	8	0	1	14	0	1	0	0	39	0	0
(*b*). Other stores ...	150	...	...	...	10	8	0	4	8	0	10	0	0	26	0	0
F.—Prizes at shows ...	350	300	0	0	...	...	...	...	...	...	...	...	...	...	...	...
G.—Land and buildings ...	800	...	...	...	253	14	0	35	0	0	379	12	0	...	...	...
H.—Tools and implements—																
(*a*). Purchase ...	200	...	...	...	17	6	0	2	12	0	...	...	...	6	0	0
(*b*). Repairs ...	30	...	...	...	2	1	0	1	14	0	4	0	0	2	12	0
K.—Advances for carriage of seed, &c., to out-stations ...	700	314	12	3	265	1	0	3	0	0	1	12	0	2	0	0
L.—Books, Periodicals, &c.—																
(*a*). Purchase ...	80	12	8	0	...	...	...	...	...	...	...	...	...	...	...	...
(*b*). Binding ...	50	...	...	...	3	0	0	...	...	...	...	...	...	5	0	0
M.—Printing, Stamps and Stationery ...	500	8	3	0	133	9	6	50	4	6	14	8	0	63	5	0
N.—Expenditure not otherwise provided ...	250	16	3	6	13	7	6	6	0	0	276	2	0	33	13	0
Total Rs. ...	22,270	2,032	1	6	2,276	6	3	1,267	8	0	2,085	3	6	1,309	4	0

A. H. Society's Garden Office:

Lahore, the 1st April 1882.

B.

during the twelve months of 1881-82.

September.			October.			November.			December.			January.			February.			March.			TOTAL.		
Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
325	0	0	325	0	0	325	0	0	325	0	0	325	0	0	325	0	0	325	0	0	3,900	0	0
70	0	0	70	0	0	70	0	0	70	0	0	70	0	0	70	0	0	70	0	0	840	0	0
655	11	0	563	2	6	596	10	0	622	9	6	664	5	0	668	9	0	652	0	0	7,651	10	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	120	0	0
61	10	0	131	15	0	98	12	0	88	9	0	...	...	...	...	...	...	10	2	0	507	12	0
...	...	...	19	4	9	18	8	0	18	0	0	30	0	0	8	0	0	42	10	9	202		
2	0	0	2	10	0	...	...	...	...	...	...	3,088	7	2	...	...	...	...	...	...	3,259	3	8
16	3	6	38	10	0	...	...	...	65	10	0	768	9	7	47	10	0	...	...	...	1,227	7	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	474	11	9
35	4	0	125	8	0	136	14	0	...	...	...	124	10	0	31	8	0	1	0	0	708	8	0
29	0	0	4	1	0	5	10	0	11	8	0	1	8	0	22	0	0	21	8	0	146	3	0
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	300	0	0
...	...	...	49	15	6	...	...	...	...	...	...	570	13	7	34	7	3	...	...	...	1,323	14	4
31	4	0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..		12	0	62	2	0
0	6	6	2	7	0	2	14	0	2	2	0	4	8	0	1	8	3	1	8	0	26	0	9
112	10	3	17	3	6	48	8	3	50	6	0	109	9	6	102	13	9	202	15	6	1,231	12	0
...	...	...	...	...	...	...	...	...	3	0	0	17	14	0	...	...	...	...	...	...	33	6	0
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	0	0
162	8	0	10	5	0	21	8	0	3	0	6	46	8	6	18	10	6	6	8	0	538	14	6
35	6	6	2	14	0	12	7	0	2	8	0	112	4	0	1	0	0	5	11	3	517	12	9
1,537	15	9	1,363	0	3	1,336	11	3	1,262	5	0	5,934	1	4	1,331	2	9	1,343	11	6	23,079	7	1

E. PENHEAROW.

EDGAR SPOONER,
Supdt. Agri-Horticultural Society's Gardens.

STATEMENT

BUDGET of the AGRI-HORTICULTURAL SOCIETY, PUNJAB, for

PRTICULARS OF INCOME.	Estimated Receipts in 1881-82.	Actual Receipts in 1881-82.			Difference.			Estimated Receipts in 1882-83.		
I.—Grants-in-aid—	Rs.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
(1). Imperial, @ Rs. 450 per mensem ...	5,400	5,400	0	0	...	...	...	5,400	0	0
(2). Provincial, @ Rs. 300 do. ...	3,600	3,600	0	0	...	...	...	3,600	0	0
(3). Local Funds ...	4,248	4,248	0	0	...	...	...	4,128	0	0
(4). Education ...	120	120	0	0	...	...	...	120	0	0
II.—Lahore Municipal Committee's grant for Lawrence Hall Gardens, at Rs. 128 per mensem.	1,542	1,542	0	0	...	...	...	1,542	0	0
III.—Subscriptions—Members ...	1,200	1,030	0	0	−170	0	0	1,100	0	0
Do. Indus Valley State Railway ...	120	120	0	0	...	...	...	120	0	0
Do. Cantonment Committee, Jhelum	...	240	0	0	+240	0	0	240	0	0
IV.—Garden Produce—										
(1). Bills outstanding on 1st April 1882, and realizable for 1881-82.	1,300	941	5	9	−358	10	3	700	0	0
(2). Bills outstanding on 1st April 1882, and realizable for years previous to 1881-82.	...	...	...	...	...	...	...	300	0	0
(3). Income from sale of garden produce during the year.	3,500	4,477	3	10	+977	3	10	4,000	0	0
V.—Advances Recoverable—										
(1). Recoveries from advances made during the year.	500	538	10	3	+38	10	3	700	0	0
(2). Recoveries from outstanding advances on 1st April 1882, and realizable for previous years.	500	463	11	0	−36	5	0	500	0	0
(3). Advance to Superintendent for contingent charges.	200	200	0	0	...	...	...	200	0	0
VI.—Miscellaneous ...	50	218	12	0	+168	12	0	50	0	0
TOTAL Rs. ...	22,280	23,139	10	10	+859	10	10	22,700	0	0
Balance at close of 1881-82 ...	...	...	...	...	...	...	...	4,359	3	2
GRAND TOTAL Rs. ...	...	...	...	...	...	...	...	27,059	3	2

A. H. SOCIETY'S GARDEN OFFICE:
Lahore, the 2nd April 1882.

E. PENHEAROW,
Accountant, &c.